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**STATEMENT OF  
MARIANNE LAMONT HORINKO  
ASSISTANT ADMINISTRATOR  
OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE  
U.S. ENVIRONMENTAL PROTECTION AGENCY  
BEFORE THE SUBCOMMITTEE ON  
SUPERFUND, TOXICS, RISK AND WASTE MANAGEMENT  
OF THE  
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS  
UNITED STATES SENATE**

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Good morning Madam Chairman and Members of the Subcommittee, I am Marianne Horinko, EPA's Assistant Administrator for the Office of Solid Waste and Emergency Response. I am pleased to appear today to discuss S. 1850, the Underground Storage Tank Compliance Act of 2001, identify some of the challenges facing the Underground Storage Tank (UST) Program, and describe work EPA has undertaken to address those challenges.

**Background**

In 1984, Congress responded to the increasing threat to groundwater posed by leaking USTs by adding Subtitle I to the Resource Conservation and Recovery Act (RCRA). The statute directed EPA to develop a comprehensive regulatory program for USTs storing petroleum or certain hazardous substances to protect the environment and human health from UST releases. EPA's 1988 regulations set minimum standards for new tanks and required owners of substandard tanks to upgrade or close them. The regulations addressed a variety of other requirements including those related to leak detection and cleanup of releases when they occur.

In 1986, Congress created the Leaking Underground Storage Tank (LUST) Trust Fund to provide a stronger funding base for the cleanup portion of the underground storage tank program. The LUST Trust Fund provides money for EPA to help administer the program nationwide and implement the program in Indian Country. In 1998, Congress also created explicit authority for EPA to provide LUST funding to Federally recognized Indian tribes. The majority of the LUST Trust Funds are provided to the states to oversee cleanups, take enforcement actions at leaking tank sites, and undertake state-lead cleanups when a responsible party cannot be found or is unable or unwilling to remediate a site which presents a threat to public health and the environment. EPA provides approximately 81 percent of the annual LUST Trust Fund appropriation to the states. Since the inception of the LUST Trust Fund, states have received approximately \$790 million.

Since its inception in the mid-1980s, EPA's UST program has developed an extremely effective partnership with states to implement the program. From the outset, this program was designed to be implemented primarily by states. In general, all states implement an underground storage tank program

using grants and cooperative agreements from EPA. Twenty-nine states, Puerto Rico and the District of Columbia have been formally approved by EPA to operate their UST programs in lieu of the federal UST program. EPA retains the authority to implement and enforce the state's UST program in authorized states and to implement and enforce the federal program in unauthorized states. EPA implements and enforces the program in Indian Country where EPA works closely with Indian tribes. EPA continues to work with other states to help them have their programs formally approved. In many respects, the successes achieved by this program are due to partnerships, not only with states and tribes, but also with the private sector. We believe the UST program's effective partnerships can serve as a model for other programs.

## **Program Progress**

As EPA established the UST program, it faced some unique challenges including the immense regulated universe of over 2 million USTs. Many of these USTs were old, made of bare steel, and subject to corrosion. Since the inception of the program, EPA and the states have made substantial progress. Over 1.5 million substandard USTs have been closed. As a result of the closures, these UST systems are no longer sources of additional contamination. There are now approximately 705,000 active USTs, nearly all of which have the required leak detection and prevention equipment. Additionally, states report that approximately 75 percent of these USTs are operated and maintained correctly.

EPA and states have made substantial progress in cleaning up releases from leaking USTs. Since the inception of the program, approximately 419,000 petroleum releases from USTs have been reported. Much progress has already occurred in cleaning up releases. Cleanups have been initiated for 379,000 (over 90 percent) of these releases and cleanups have been completed for about 269,000 (approximately two-thirds) of the releases. This represents a tremendous amount of work and success by the states, tribes, EPA, responsible parties and cleanup contractors. Among the major factors affecting this success are the cleanup funds states have established. These funds, which raise and expend approximately \$1 billion annually, pay for the vast majority of site assessments and remediation each year.

We have also made considerable progress reducing the number of new releases. Since 1990, the number of new releases reported annually has averaged approximately 30,000. In FY 2001, the number of new releases reported dropped to approximately 6,500. While this represents a dramatic improvement, it is still too many.

## **Program Challenges**

While substantial progress has been made since the mid-1980s, there are additional challenges that still need to be addressed. First, while many releases have been cleaned up, there are still approximately 150,000 where the cleanup has not been completed including releases with methyl

tertiary-butyl ether (MTBE) contamination. Second, there are hundreds of thousands of abandoned USTs, many of which have had releases that need to be addressed. Third, while USTs have been improved and generally are operated and maintained properly, approximately 25 percent of the UST systems still need to be brought into compliance and all UST systems need to be operated and maintained properly so that once they are in compliance, they remain in compliance. And finally, while UST systems are greatly improved and the number of new releases have dramatically reduced, there are still releases from new and upgraded systems.

The first challenge is the large number of releases – 150,000 – that are not yet cleaned up. While substantial progress has been made on many of these releases, there still is an immense amount of work that remains to be done to increase the pace at which cleanups are completed, and reduce and ultimately eliminate this backlog of releases.

The vast majority of regulated USTs contain petroleum products which contain toxic substances, such as benzene, toluene, and naphthalene. Therefore, releases from USTs may pose both human health and environmental risks. Further, the presence of MTBE makes the challenge of cleaning up these releases more difficult, because MTBE is more likely to reach groundwater than other petroleum constituents, and once it does, can make the water unpotable due to its unpleasant taste and odor.

MTBE contamination has affected communities across the country. For example, the City of Santa Monica, California has faced a massive loss of a significant portion of its drinking water supplies due to MTBE contamination caused by failures of UST systems. Lake Tahoe has faced similar problems. In Long Island, New York, MTBE contamination has resulted in alternate or improved water supplies having to be provided for over 160 affected public and private wells. Pascoag, Rhode Island, while smaller in size than Santa Monica, Lake Tahoe or Long Island, has also lost its water supply. More recently, attention has turned to a release in Roselawn, Indiana. In this case, the source of the release, which may be from an UST system, has not yet been identified.

MTBE contamination from all sources, including USTs, is fairly widespread. A 2001 U.S. Geological Survey study found that MTBE was detected in 9 percent of community water systems in 10 states, although generally below EPA's drinking water advisory value. A national study by the New England Interstate Water Pollution Control Commission in 2000 found that most states detect MTBE at 60 to 80 percent of leaking UST sites. Based on an analysis of data from 31 states, a report in *Environmental Science & Technology* (May 2000) estimated that up to 9,000 community water supplies in those 31 states may be threatened by MTBE contamination.

The second challenge we face is finding, removing and, where necessary, cleaning up abandoned USTs. The General Accounting Office (GAO) estimated there are approximately 200,000 abandoned USTs at brownfields sites. In addition, there are many abandoned USTs at sites that have not been designated as brownfields sites. The workload associated with abandoned tanks, many of

which have not yet been found, probably exceeds that of dealing with the backlog of known release sites that have yet to be cleaned up.

Preventing releases before they occur is the best way to protect human health and the environment. The remaining challenges focus on preventing and rapidly detecting releases before they become problems.

The third challenge involves compliance with the UST regulations. In a recent report, *Improved Inspections and Enforcement Would Better Ensure the Safety of Underground Storage Tanks*, the GAO estimated that approximately 29 percent of USTs were not operated or maintained properly. While the vast majority of USTs have the proper equipment, proper operation and maintenance remains a considerable challenge. Owners and operators of USTs normally have many responsibilities which compete with the time necessary to properly operate and maintain their UST systems. The challenge here is to help all owners and operators to achieve compliance and maintain it through ongoing proper operation and maintenance of their UST systems. We will do this using all available tools including compliance assistance, training, inspections, and enforcement.

Finally, as we have already noted, new and upgraded UST systems continue to have releases, although at a much reduced rate. There is also evidence releases are not being detected by the existing leak detection infrastructure as often as they should be. The federal requirements set basic UST system performance standards, but allow a wide variety of approaches to meet those standards. While that provides significant flexibility to the tank owners, it also complicates efforts to operate, maintain, and inspect UST systems. If the equipment is insufficient or the operation and maintenance of the equipment is not performed correctly, there will continue to be significant risk posed by releases from USTs. Our challenge is to determine the source and cause of the problems, and identify the appropriate remedies.

### **Program Initiatives To Address The Challenges**

In October 2000, EPA announced four initiatives to address the challenges facing the program: (1) Faster Cleanups, (2) USTfields for Abandoned Tanks, (3) Improving Compliance, and (4) Evaluating UST System Performance. In addition, the Agency has taken additional actions to deal with the challenges posed by MTBE. Before turning to the four initiatives, let's briefly examine some of the work that deals with MTBE.

EPA has undertaken several efforts to aid states in addressing problems with MTBE contamination. EPA has provided substantial funding and/or technical support to Santa Monica, South Lake Tahoe and Long Island to remediate MTBE. In addition, EPA is chairing a federal-state workgroup that will create a multi-chapter interim guidance for states on MTBE related issues. Two years ago, EPA supported a grant to the New England Interstate Water Pollution Control Commission to develop a national baseline survey on the scope of the MTBE problem. EPA also maintains a website which documents MTBE remediation case studies so that experiences with MTBE remediation

can be shared nationwide. EPA is also conducting a demonstration of treatment and remediation technologies for MTBE-contaminated soil, groundwater and drinking water at Port Hueneme, California.

## Faster Cleanups

The goal of our first initiative, Faster Cleanups, is to increase the pace at which cleanups, including those with MTBE contamination, are initiated and completed, with an eye toward making land and water resources available for reuse. To accomplish this goal, EPA is finalizing a method for setting goals for completing cleanups more quickly. EPA has also recently created a web-based tool box for promoting pay-for-performance contracting methods which in most cases shortened cleanup times and reduced cleanup costs by 30 to 50 percent. Finally, EPA plans to foster the development of voluntary multi-site cleanup agreements between state or Regional EPA programs and private, federal, or tribal owners of multi-site leaking underground storage tanks. The economies of scale in developing multi-site agreements should help achieve faster cleanups.

## USTfields

Our second initiative, dealing with USTfields, is designed to address abandoned USTs. USTfields applies to abandoned or underused industrial and commercial properties where reuse is complicated by real or perceived environmental contamination from federally-regulated USTs. Petroleum contamination is generally excluded from coverage under the Comprehensive Environmental Response, Compensation, and Liability Act and is not, therefore, covered under EPA's current brownfields program. EPA has undertaken the USTfields initiative to address petroleum contamination from abandoned tanks generally excluded from brownfields reuse. In November 2000, EPA announced its first ten USTfield pilot grants. A recently released report, *Recycling America's Gas Stations*, captures the experiences from the first ten pilots. These pilots are intended to help increase our knowledge of finding out how best to address abandoned and underused petroleum-impacted sites. EPA expects to announce an additional 40 USTfield grants later this spring.

In January 2002, President Bush signed the "Small Business Liability Relief and Brownfields Revitalization Act" into law. Under this legislation, substantially more funding is authorized to deal with abandoned petroleum contaminated sites that are not addressed under current programs. The President's budget requests \$30 million to carry out this effort. This legislation will enable states, tribes, and communities throughout the country to assess, remediate, and ready for reuse a multitude of sites that otherwise would remain abandoned for many years. The USTfield pilots will provide invaluable lessons as we deal with many abandoned sites under the new legislation.

## Compliance

Our third initiative focuses on improving compliance with the UST requirements. EPA and our state and tribal partners are constantly working to improve compliance. As part of this initiative, we are taking several specific steps. First, we have changed the way we are measuring compliance to focus on proper operation and maintenance. Previously, we focused primarily on whether the facility had the



proper equipment. As part of this initiative, we are improving the quality of compliance data so that EPA, states, and the public have an accurate and consistent measure of compliance. Second, we are looking at a variety of approaches, including third-party inspections and environmental results programs, such as the one in Massachusetts being used to improve compliance by dry cleaners, printers and photo finishers, to help improve compliance. Third, EPA is promoting multi-site compliance agreements between EPA and multi-site owners to bring their tanks into operational compliance. Finally, EPA is focusing additional attention on training needs, both for inspectors and for owners and operators. We are nearing completion of an evaluation of training needs. And we are working to increase training opportunities through a variety of institutions, including universities, and are exploring increased use of internet-based training.

### **UST System Performance**

The fourth initiative, Evaluating UST System Performance, is an effort to determine the sources and causes of releases, as well as the reasons for the failure of release detection to detect releases, and to develop approaches to address these problems. To evaluate the performance of UST systems, EPA needed to gather and review quantitative and qualitative data currently available, and to initiate additional studies to gather additional quantitative data. EPA gathered and analyzed more than 50 existing reports or studies from states and industry and has met with or interviewed numerous state and industry experts. In order to obtain greater quantitative information about the types of systems failing and the reasons for those failures, EPA is partnering with 24 states to perform leak autopsies at new release sites to determine the source and cause of the release. EPA is also initiating studies with a number of states to evaluate specific UST system components and technologies and to compare the performance of various UST systems. EPA has learned much from these efforts about the sources and causes of problems, and there are clear trends emerging from these efforts.

EPA's evaluation of UST system performance has confirmed that new and upgraded UST systems still have releases and those releases are often not properly detected. We have identified faults with most components of UST systems, including the design, installation, operation, and maintenance of the various components. Many of the problems appears to be caused by human error or oversight – including failure to test and maintain corrosion protection and leak detection systems – but problems with the actual equipment is also of concern. Piping continues to be the leading cause for concern. Spills and overfills during product delivery also continue at an unacceptable rate and releases from dispensers have emerged as a major concern. Since most UST systems in operation are still single-walled, a failure of these UST systems will lead to a release directly into the environment. And when a release does occur, the existing release detection infrastructure is failing to adequately detect releases from tanks and pipes, and is, in fact, not even designed to detect most spills and overfills or dispenser releases. Also, the release detection infrastructure is by design reactive, only detecting releases after they enter the environment, unless a system is secondarily contained with interstitial monitoring. Finally, there is emerging evidence that vapor releases from new and upgraded UST systems are common, and released vapors – including MTBE – can find their way into the groundwater.



It is important to note that the current generation of UST systems is significantly more protective than the previous generation, but a number of problems remain. More work needs to be done to further understand the sources and causes of problems and to identify appropriate remedies. As part of this work, we will be collecting additional data. We will also increase our discussions with states and the regulated community to further examine these issues and to discuss potential solutions to the problems and challenges that still face us. This remains a significant priority for EPA.

In summary, Madam Chairman, we believe very substantial progress has been made on a variety of UST challenges including closing substandard USTs, improving compliance, and cleaning up releases. Nevertheless, the amount of work, especially in light of MTBE contamination, remaining to be accomplished is also substantial. We look forward to working with Congress, states, and our other partners to address the work before us.

### **S. 1850 - Underground Storage Tank Compliance Act of 2001**

I would like to commend Senators Chafee, Carper, Smith, Jeffords and Inhofe for introducing S. 1850, the Underground Storage Tank Compliance Act of 2001, which would help prevent and clean up releases from USTs. The Agency has been reviewing the legislation and continues to analyze specific provisions. While we do not have an official Administration position on the bill, I have some thoughts I would like to share.

First of all, I appreciate the Subcommittee's recognition of the importance of preventing and cleaning up UST releases. While tremendous progress has been made over the past decade there are still substantial challenges and risks posed by USTs, as I have outlined in this testimony. More specifically, the focus on remediating MTBE contamination is both timely and appropriate. As I have discussed, MTBE poses challenges to communities throughout the country. There are thousands of releases containing MTBE that still need to be addressed, and this will be a continuing challenge for EPA, its state and tribal partners, and the regulated community.

Preventing future releases is equally important and I also commend the Subcommittee on its efforts to provide more tools and resources to make that happen. S.1850's focus on inspection frequency and improving operator training is appropriate and could go a long way toward ensuring UST systems are properly managed to reduce the risk of releases.

Section 6 of S. 1850 has several important provisions. One of these provisions deals with delivery prohibition programs. Approximately 20 states have some form of delivery prohibition program. While these programs vary from state-to-state, many states have found these effective in promoting compliance with the UST requirements. This tool could be extremely valuable to those states that do not currently have delivery prohibition programs and to the federal government.

The legislation expands the eligible uses of LUST funding. This would give increased flexibility to both states and EPA to direct our resources to the most pressing needs. For example, we could use LUST funding for inspections and enforcement to ensure compliance with the preventive requirements. Since unique factors affect many states, the flexibility will prove particularly important to deal with state-specific issues.

The legislation also places increased emphasis on operator training. We believe this is extremely important to ensure proper operation and maintenance of UST systems. Some states, including California, are already taking steps to ensure proper operator training. Given the high turnover in facility personnel, ensuring proper training for all UST operators is particularly challenging. To meet this challenge will take considerable effort by the regulated community, states, and EPA.

While there are many provisions in S. 1850 that would strengthen the current UST program, there are provisions that need further clarification or could have the unintended effect of hindering UST program progress. We would be pleased to work with you and your staff to discuss these issues and concerns with the funding authorization levels in more detail.

I again commend the Subcommittee for focusing on the challenges facing the UST program and for supporting efforts to protect our citizens from risks posed by leaking USTs. I look forward to working closely with the Environment and Public Works Committee and Congress as it continues deliberations on the bill.